

Figure 1

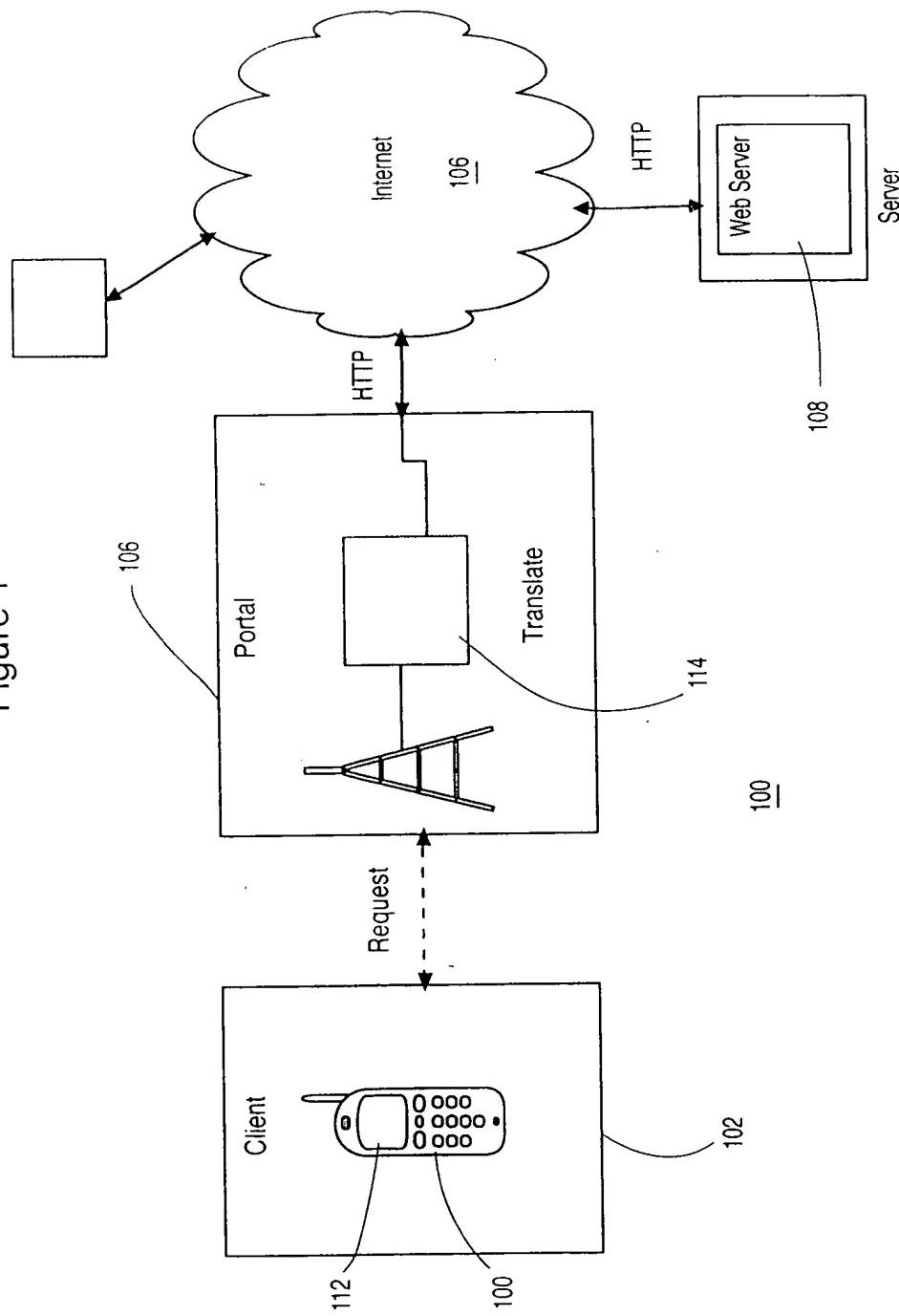


Figure 2

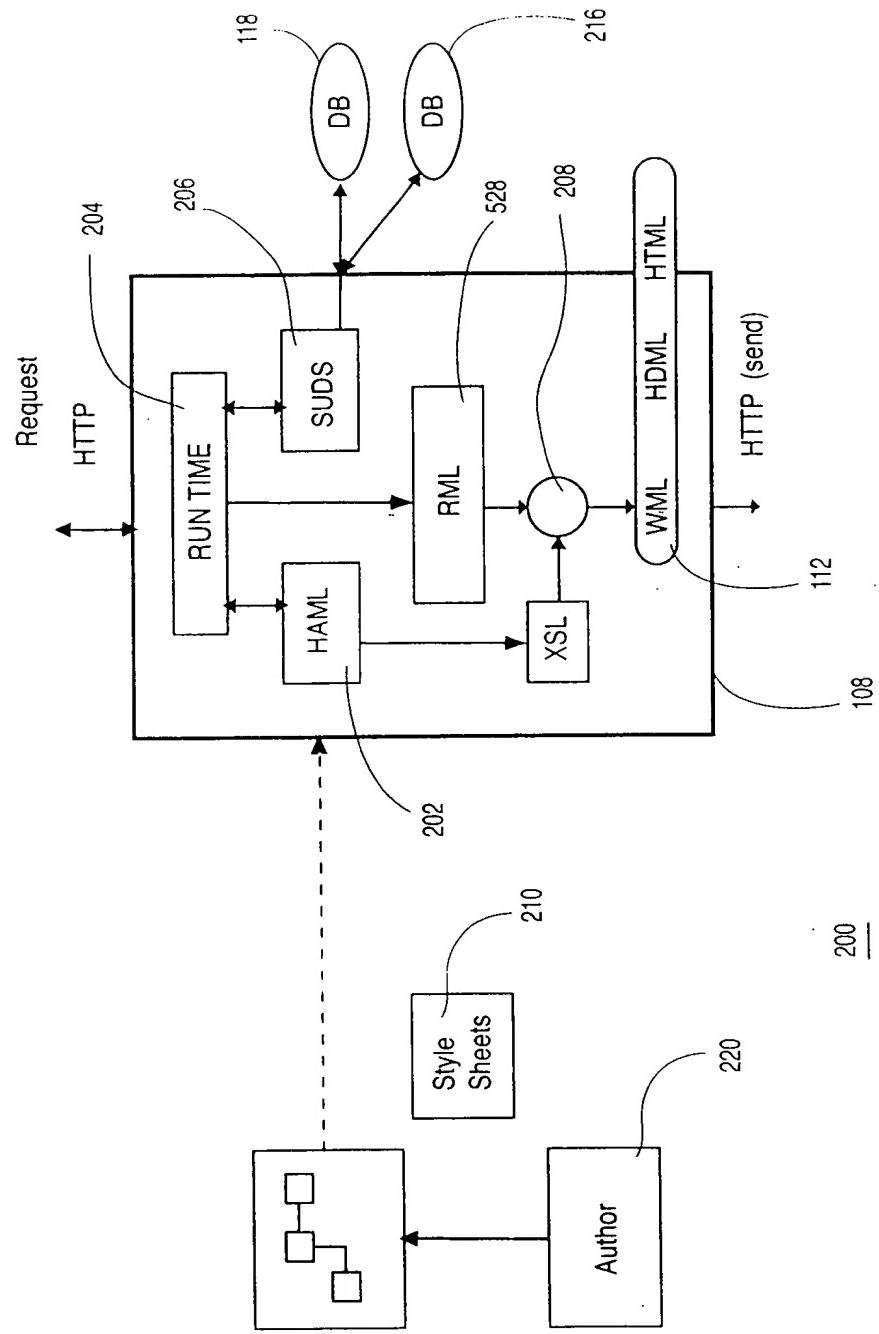
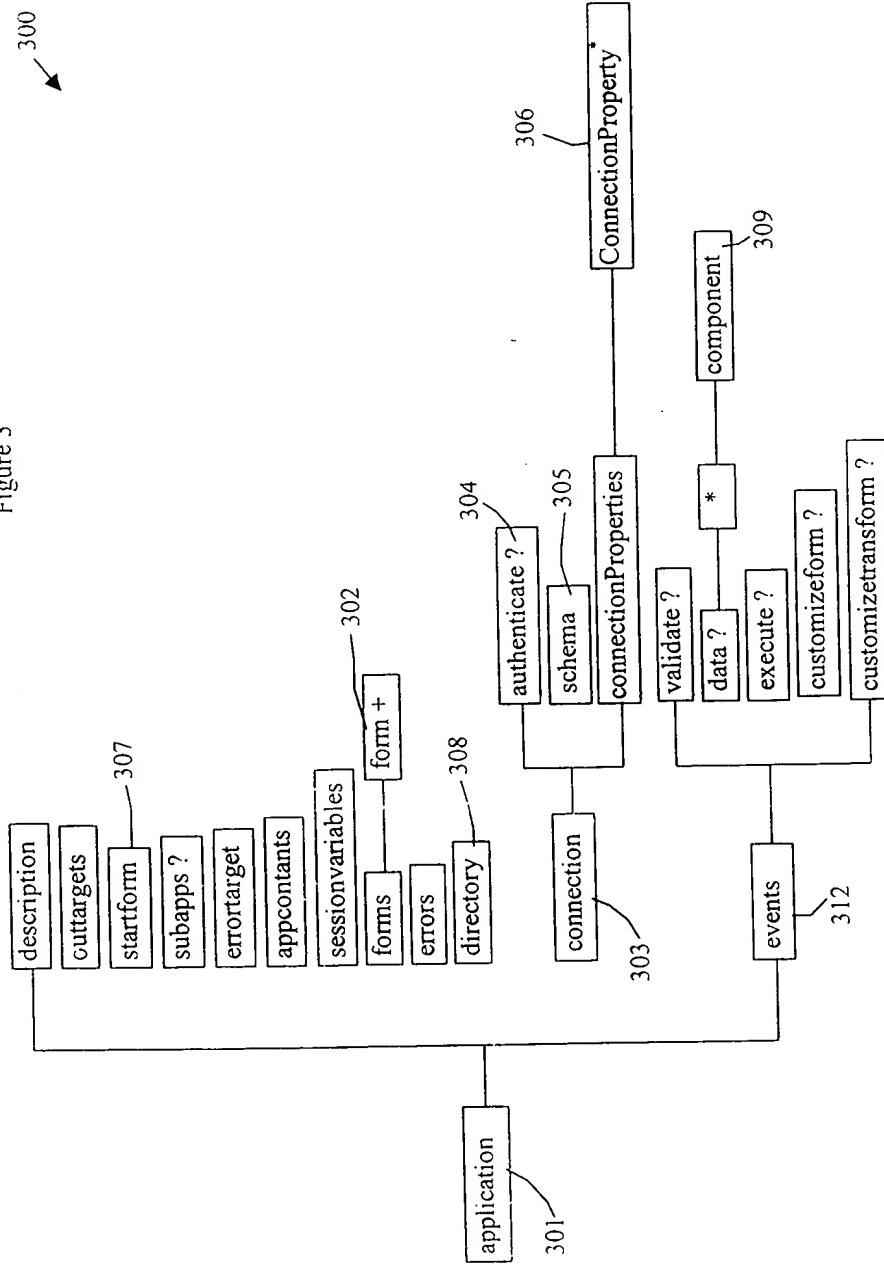


Figure 3



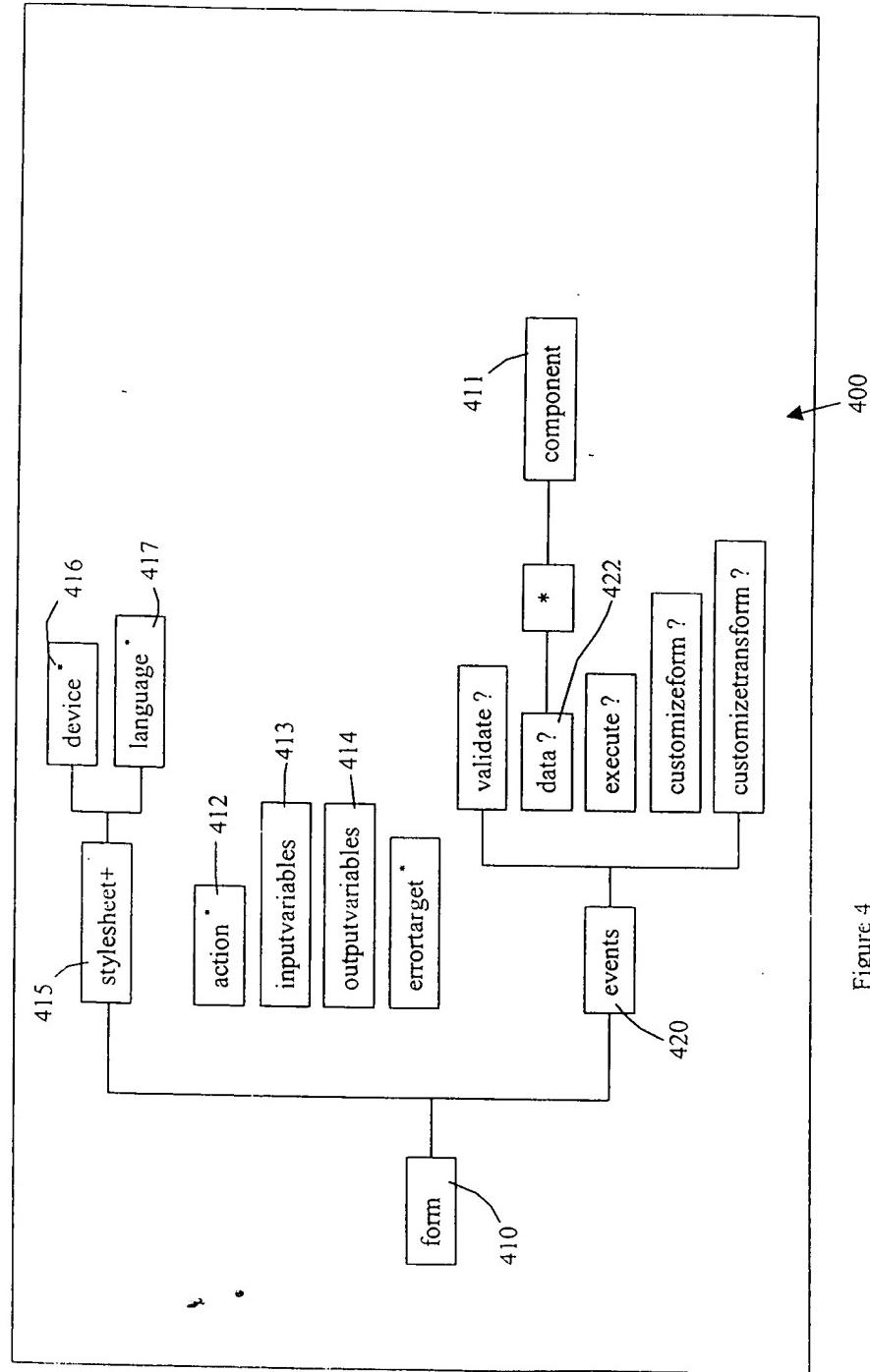


Figure 4

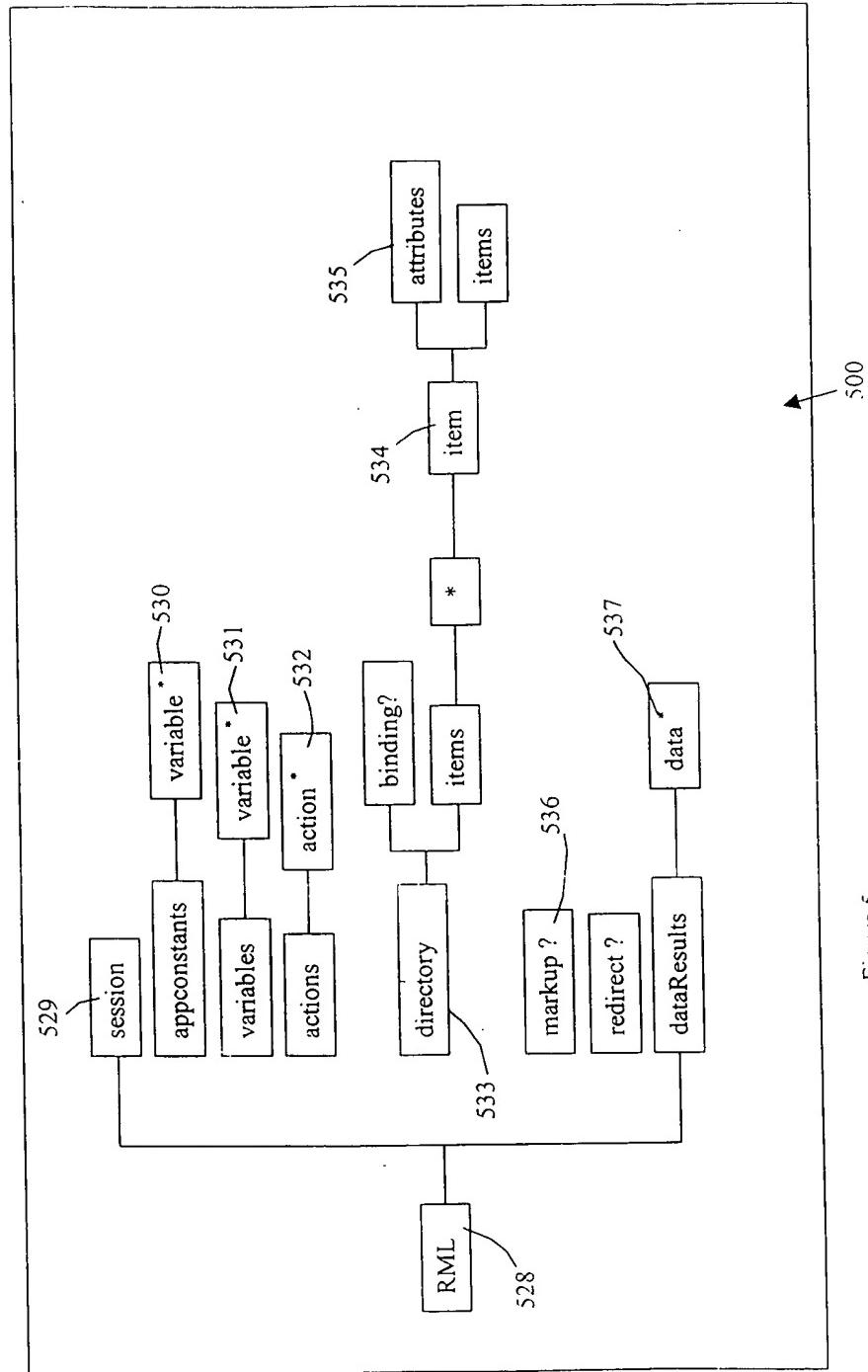


Figure 5

Figure 6

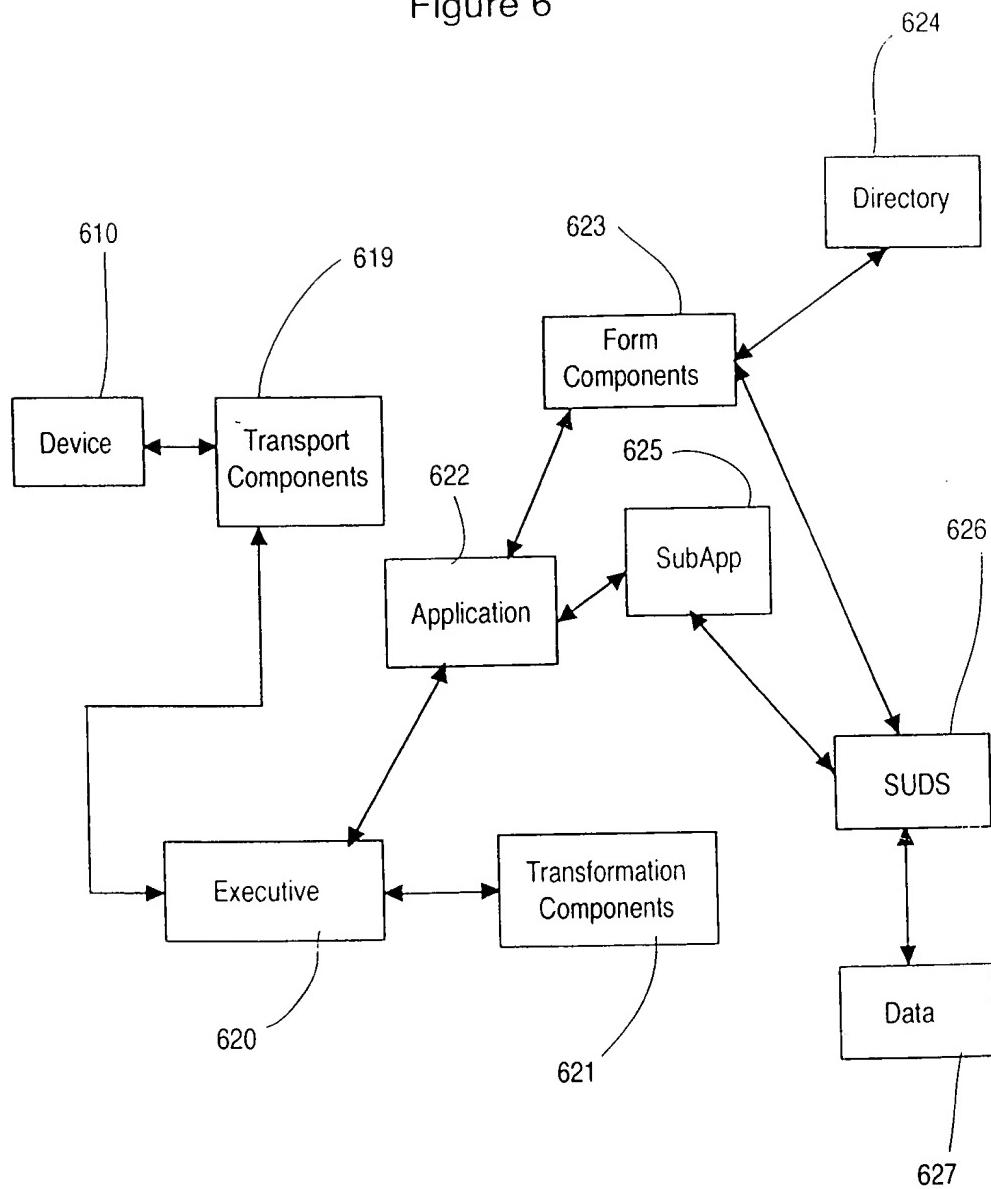


Figure 7

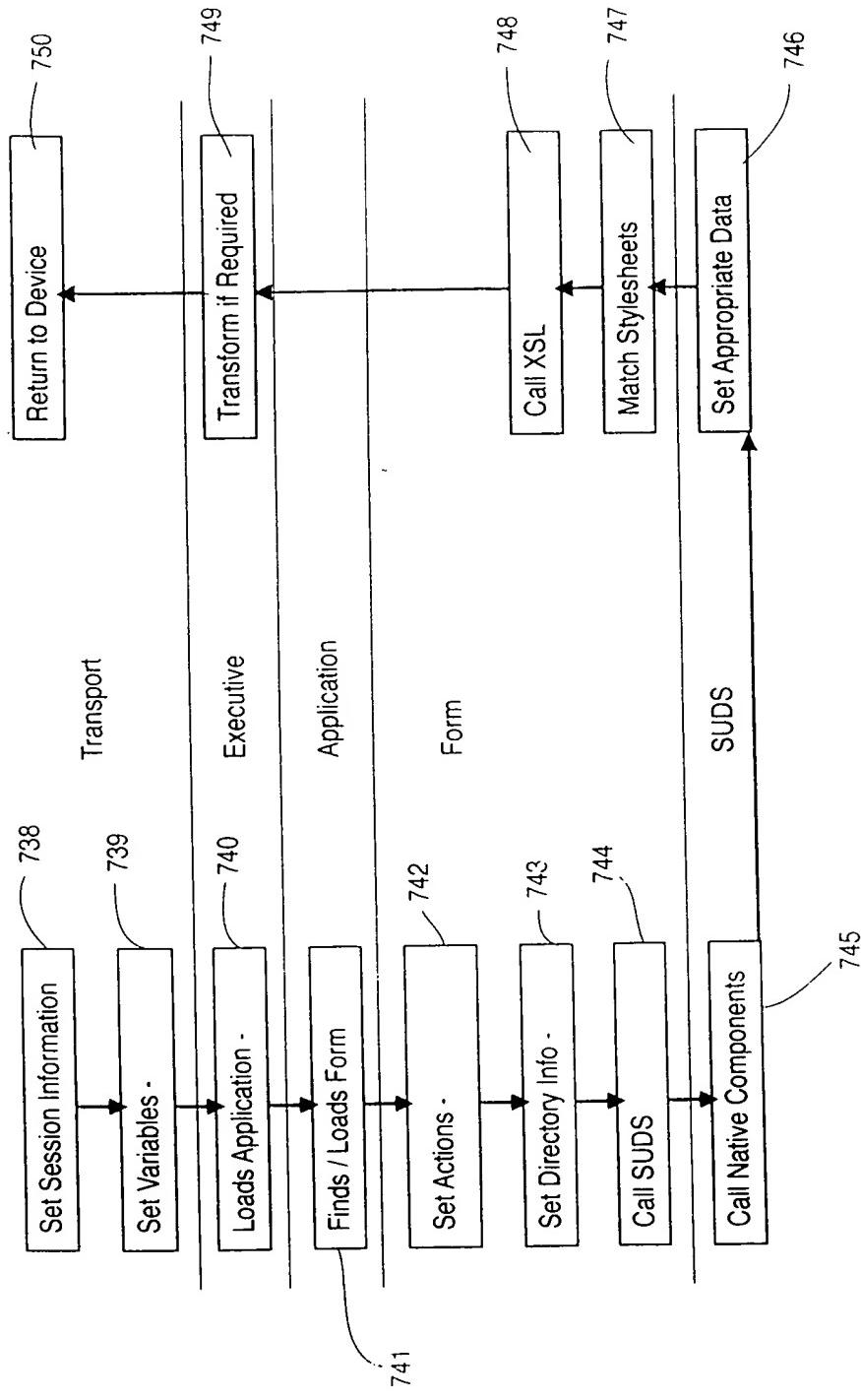
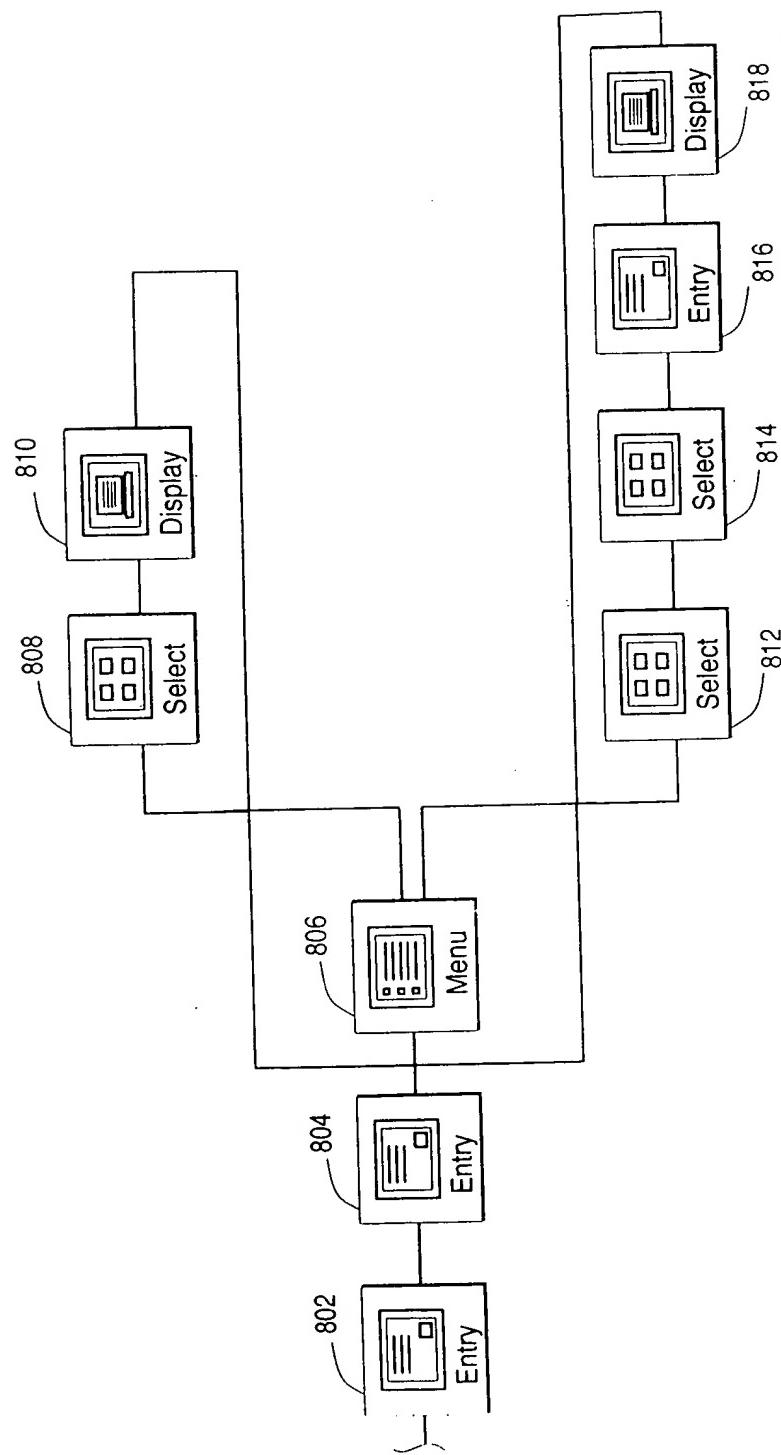


Figure 8 (a)



```
<?xml version="1.0" encoding="UTF-8" ?>
<application usecookies="false" id="F6681A6F-FB7C-4901-855C-08791DDE8DC8">
    <securevariables="false">
        <description version="1" name="MQBanking" />
        <outtargets />
        <startform totargetid="UserID" />
        <subapps />
        <errortarget totargetid="UserID" />
    </securevariables>
    <properties>
        <variable default="209.23.23.23" name="ServerIP" />
    </properties>
    <sessionvariables>
        <variable name="Session" />
    </sessionvariables>
    <forms>
        - <form targetid="UserID" includeheaders="false">
            <stylesheet contenttype="WML11" url="http://www.mobileq.com" />
            <action totargetid="Password" name="OK" />
            <inputvariables />
            - <outputvariables>
                <variable name="UserID" />
            </outputvariables>
            <events />
        </form>
        - <form targetid="Password" includeheaders="false">
            <stylesheet contenttype="WML11" url="http://www.mobileq.com" />
            <action totargetid="Main" name="OK" />
            <inputvariables>
                <variable name="UserID" />
            </inputvariables>
            - <outputvariables>
                <variable name="Session" />
            </outputvariables>
            <events />
        </form>
        - <form targetid="Main" includeheaders="false">
            <stylesheet contenttype="WML11" url="http://www.mobileq.com" />
            <action totargetid="Account" name="Account Balance" />
            <action totargetid="Bill Payment" name="Bill Payment" />
            <action totargetid="Transfer" name="Account Transfer" />
            <inputvariables />
            <outputvariables />
            <events />
        </form>
        - <form targetid="Account" includeheaders="false">
            <stylesheet contenttype="WML11" url="http://www.mobileq.com" />
            <action totargetid="Details" name="OK" />
            <inputvariables />
            - <outputvariables>
                <variable name="AccountID" />
            </outputvariables>
```

Figure 8(b)

```
<events />
</form>
<form targetid="Details" includeheaders="false">
  <stylesheet contenttype="WML11" url="http://www.mobileq.com" />
  <action totargetid="Main" name="OK" />
  <inputvariables>
    <variable name="AccountID" />
  </inputvariables>
  <outputvariables />
  <events />
</form>
<form targetid="Bill Payment" includeheaders="false">
  <stylesheet contenttype="WML11" url="http://www.mobileq.com" />
  <action totargetid="Bill" name="OK" />
  <inputvariables />
  <outputvariables>
    <variable name="AccountID" />
  </outputvariables>
  <events />
</form>
<form targetid="Bill" includeheaders="false">
  <stylesheet contenttype="WML11" url="http://www.mobileq.com" />
  <action totargetid="Amount" name="OK" />
  <inputvariables>
    <variable name="AccountID" />
  </inputvariables>
  <outputvariables>
    <variable name="BillID" />
    <variable name="AccountID" />
  </outputvariables>
  <events />
</form>
<form targetid="Amount" includeheaders="false">
  <stylesheet contenttype="WML11" url="http://www.mobileq.com" />
  <action totargetid="Confirm" name="OK" />
  <inputvariables>
    <variable name="BillID" />
    <variable name="AccountID" />
  </inputvariables>
  <outputvariables>
    <variable name="AccountID" />
    <variable name="BillID" />
    <variable name="Amount" />
  </outputvariables>
  <events />
</form>
<form targetid="Confirm" includeheaders="false">
  <stylesheet contenttype="WML11" url="http://www.mobileq.com" />
  <action totargetid="Main" name="Cancel" />
  <inputvariables>
    <variable name="AccountID" />
    <variable name="BillID" />
  </inputvariables>
```

Figure 8(c)

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```
<variable name="Amount" />
</inputvariables>
<outputvariables>
<variable name="AccountId" />
<variable name="BillID" />
<variable name="Amount" />
</outputvariables>
<events />
</form>
</forms>
<errors />
<events />
</application>
```

Figure 8(d)

0000000000000000

```
<?xml version="1.0" encoding="UTF-8"?>
<data:results>
    <data name="source1">
        <RECORDS>
            <RECORD>
                <Blair PK="1">172-32-1176</Blair>
                <Test1 PK="1">1</Test1>
                <Test2 PK="1">2</Test2>
                <Test3 PK="1">3</Test3>
                <LastName>White</LastName>
                <FirstName>Johnson</FirstName>
            </RECORD>
            <RECORD>
                <Blair PK="1">213-46-891</Blair>
                <Test1 PK="1">1</Test1>
                <Test2 PK="1">2</Test2>
                <Test3 PK="1">3</Test3>
                <LastName>Green</LastName>
                <FirstName>Marjorie</FirstName>
            </RECORD>
            <RECORD>
                <Blair PK="1">238-95-7766</Blair>
                <Test1 PK="1">1</Test1>
                <Test2 PK="1">2</Test2>
                <Test3 PK="1">3</Test3>
                <LastName>Carson</LastName>
                <FirstName>Cheryl</FirstName>
            </RECORD>
            <a>
                <RECORD>
                    <Blair PK="1">238-95-7766</Blair>
                    <Test1 PK="1">1</Test1>
                    <Test2 PK="1">2</Test2>
                    <Test3 PK="1">3</Test3>
                    <LastName>Carson</LastName>
                    <FirstName>Cheryl</FirstName>
                </RECORD>
            </a>
            <a>
                <b>
                    <RECORD>
                        <Blair PK="1">238-95-7766</Blair>
                        <Test1 PK="1">1</Test1>
                        <Test2 PK="1">2</Test2>
                        <Test3 PK="1">3</Test3>
                        <LastName>Carson</LastName>
                        <FirstName>Cheryl</FirstName>
                    </RECORD>
                </b>
            </a>
        </RECORDS>
    </data>
</data:results>
```

Figure 9(a)

YODA'S COFFEE

```
</data>
<data name="source2">
  <RECORDS>
    <RECORD>
      <Blair PK="1">aaaaaa</Blair>
      <Test1 PK="1">1</Test1>
      <Test2 PK="1">2</Test2>
      <Test3 PK="1">3</Test3>
      <LastName>White</LastName>
      <FirstName>Johnson</FirstName>
    </RECORD>
    <RECORD>
      <Blair PK="1">bbbbbbb</Blair>
      <Test1 PK="1">1</Test1>
      <Test2 PK="1">2</Test2>
      <Test3 PK="1">3</Test3>
      <LastName>Green</LastName>
      <FirstName>Marjorie</FirstName>
    </RECORD>
    <RECORD>
      <Blair PK="1">cccccc</Blair>
      <Test1 PK="1">1</Test1>
      <Test2 PK="1">2</Test2>
      <Test3 PK="1">3</Test3>
      <LastName>Carson</LastName>
      <FirstName>Cheryl</FirstName>
    </RECORD>
    <a>
      <RECORD>
        <Blair PK="1">ddddddd</Blair>
        <Test1 PK="1">1</Test1>
        <Test2 PK="1">2</Test2>
        <Test3 PK="1">3</Test3>
        <LastName>Carson</LastName>
        <FirstName>Cheryl</FirstName>
      </RECORD>
    </a>
    <a>
      <b>
        <RECORD>
          <Blair PK="1">eeeeeee</Blair>
          <Test1 PK="1">1</Test1>
          <Test2 PK="1">2</Test2>
          <Test3 PK="1">3</Test3>
          <LastName>Carson</LastName>
          <FirstName>Cheryl</FirstName>
        </RECORD>
      </b>
    </a>
  </RECORDS>
</data>
</dataresults>
```

Figure 9(b)

```
<actions>
  <action formatstring="" actionid="OK" querystring="?
    _SQRSIGN=A&_SQAPPID={B77444A1-8D9E-4248-A664-
    6C483F8B4540}&_ACTIONID=OK&_SQFORMID={8D7B4336-6341-
    4D2C-B2D8-49FE88D1B13A}&EmployeeID=$EmployeeID" />
</actions>
<dictionary>
  <variable />
  <variable />
</dictionary>
</rml>
```

Figure 9(c)

```
<xsl:stylesheet xmlns:xsl="http://www.w3.org/TR/WD-xsl">
  <xsl:template match="/">
    <wml>
      <head>
        <meta name="FormType" content="SQSelectForm" />
        <meta name="ListMethod" content="numeric" />
      </head>
      <card>
        <xsl:attribute name="title">qwe</xsl:attribute>
        <p>
          <select>
            <xsl:attribute name="title">qwe</xsl:attribute>
            <xsl:attribute name="name">asd</xsl:attribute>
            <xsl:for-each select="/rml/dataresults/data
[@name='source2']//RECORD">
              <option>
                <xsl:attribute name="value">
                  <xsl:value-of select="Blair" />
                  z1z
                  <xsl:value-of select="Test1" />
                  z1z
                  <xsl:value-of select="Test2" />
                  z1z
                  <xsl:value-of select="Test3" />
                </xsl:attribute>
                <xsl:attribute name="title">
                  <xsl:value-of select="LastName" />
                  '
                  <xsl:value-of select="FirstName" />
                  '
                  <xsl:value-of select="/rml/data
[@name='source1']/RECORDS/RECORD/Blair" />
                </xsl:attribute>
                blah blah blah
              </option>
            </xsl:for-each>
          </select>
        </p>
        <xsl:for-each select="/rml/actions//action">
          <do>
            <xsl:attribute name="type">accept</xsl:attribute>
            <xsl:attribute name="label">
              <xsl:value-of select="@actionid" />
            </xsl:attribute>
            <go>
              <xsl:attribute name="href">
                <xsl:value-of select="@querystring" />
              </xsl:attribute>
            </go>
          </do>
        </xsl:for-each>
      </card>
```

Figure 10(a)

Figure 10(b)

```
</wml>
</xsl:template>
</xsl:stylesheet>
```

DATA
DATA
DATA
DATA
DATA

```
<wml>
  <head>
    <meta name="FormType" content="SQSelectForm" />
    <meta name="ListMethod" content="numeric" />
  </head>
  <card title="Select Account">
    <p>
      <select title="Select Account" name="HoldingsAccountID">
        <option value="1" title="Acct 10314">Acct 10314</option>
        <option value="2" title="Acct 11345">Acct 11345</option>
      </select>
      <br />
    </p>
    <do type="accept" label="OK">
      <go href="?_SQRSIGN=A&_SQAPPID={8D360BDF-E570-45E9-BEC1-
        4ESDD949C5C0}&_ACTIONID=OK&_SQFORMID={BCC091A1-63D4-
        11D3-9E34-0090273EFC3B}
        &HoldingsAccountID=${HoldingsAccountID}
        &UserID=246531&Session=1" />
    </do>
  </card>
</wml>
```

Figure 11

பெரும்பால் கிடைக்கின்றது

Figure 12

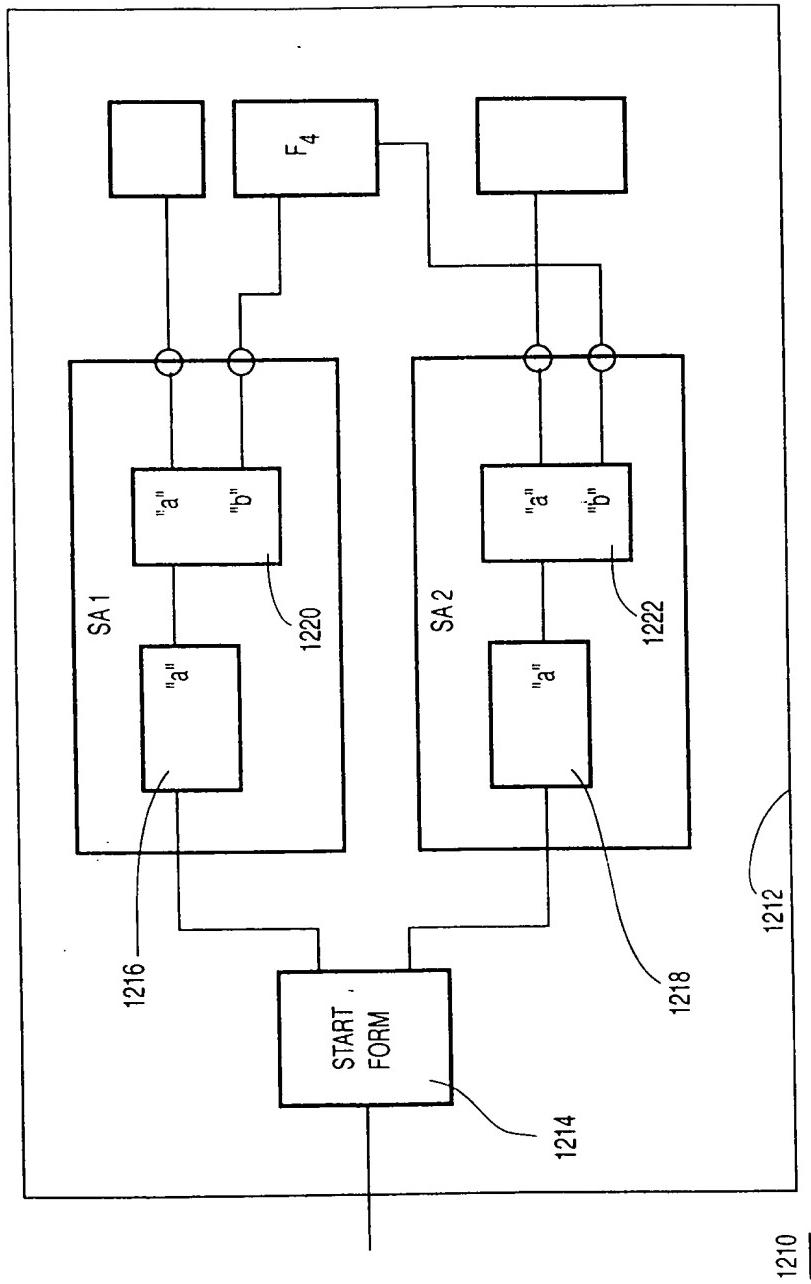
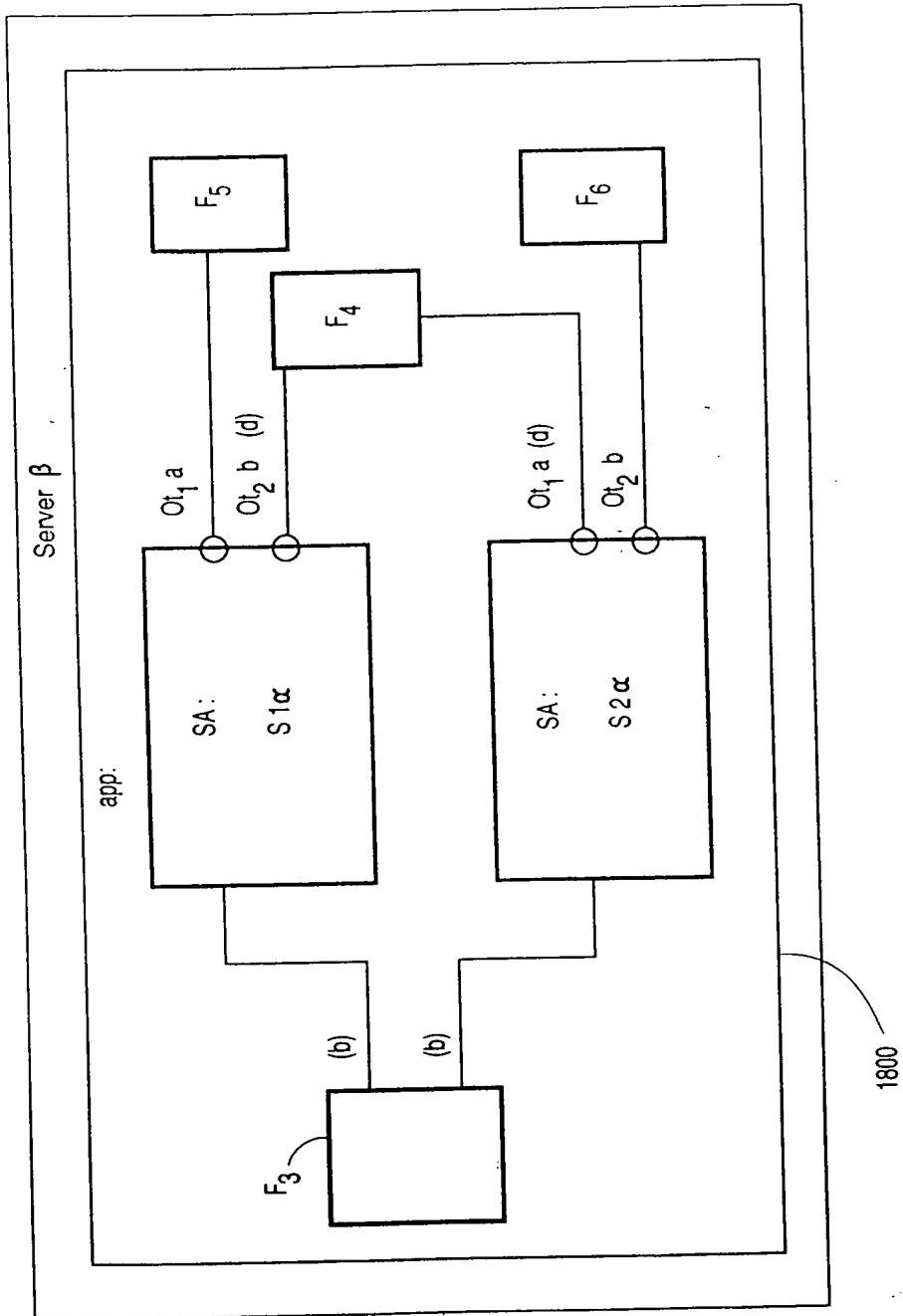
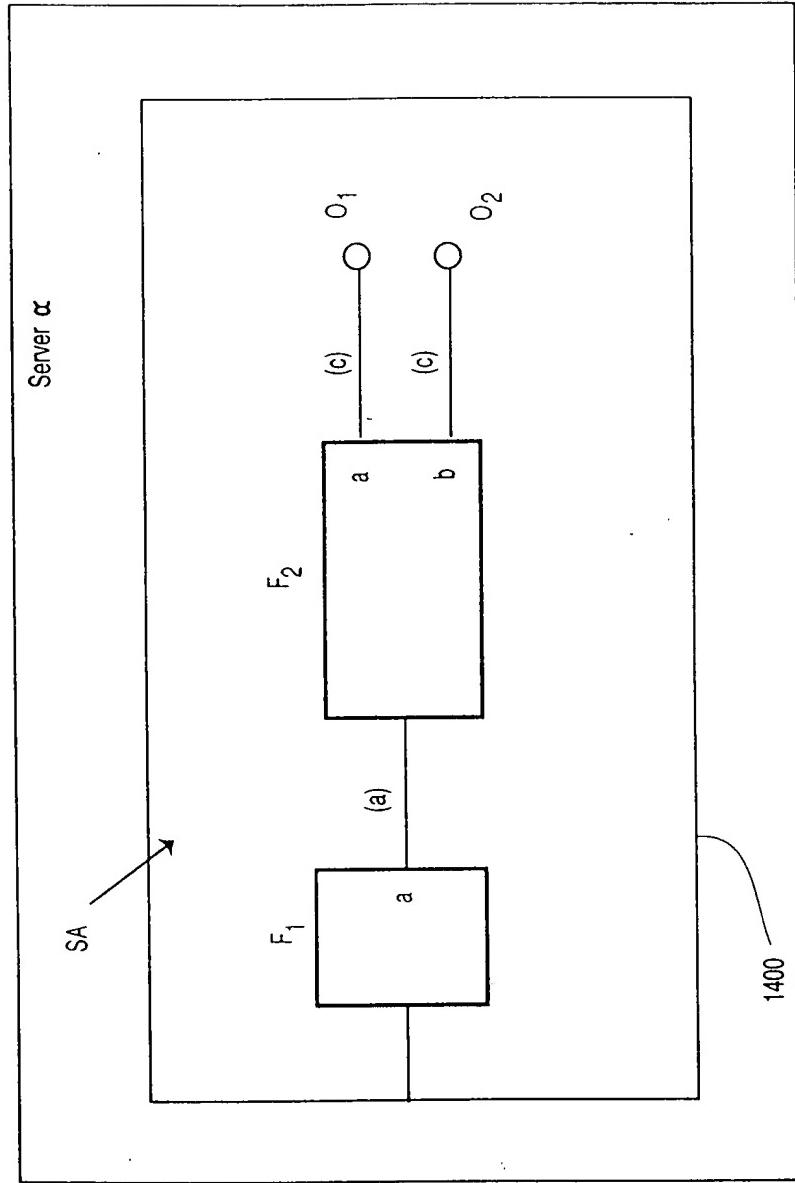


Figure 13



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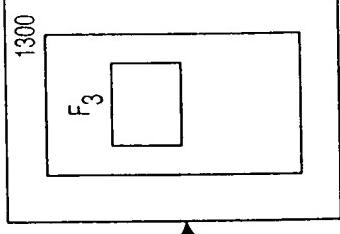
Figure 14



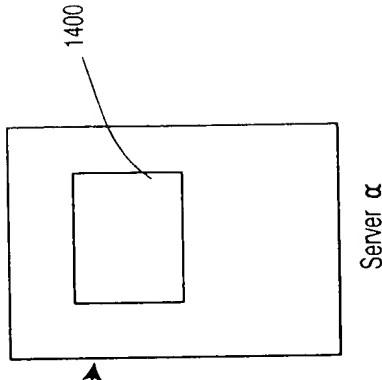
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Figure 15

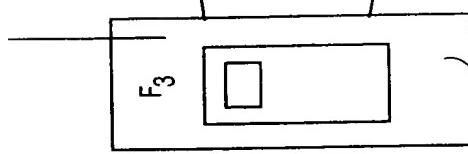
Server β



1514
Link "a"



Link "a"



1510

Figure 16 a

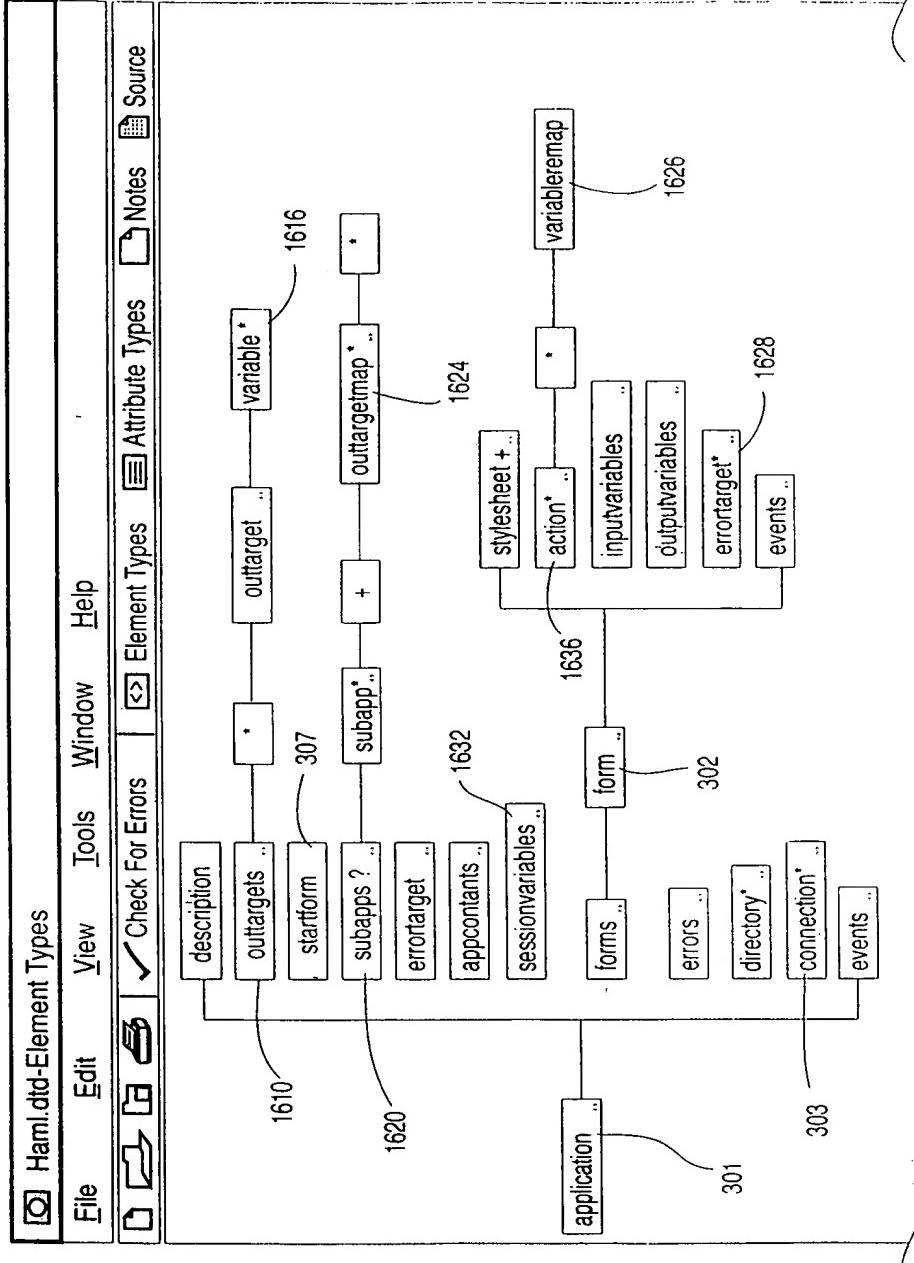


Figure 16 b

Element Types	Text	Elem	Data	Content Model	Attributes
application	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	(description, outtargets, startform, subapps?, err (variable*)	securevariable targetid name
outtarget	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	(variable*)*	
sessionvariables	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
variable	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		default required

Receive request:

- Determine request signature
 - app
 - targetid
 - language
 - markup
- Add to Runtime XML (RML)
 - Request signature
 - Dictionary element containing the Name/value pairs from request
- Load app
- Pass RML to app
- Process app
 - Find targetid?
 - Subapp
 - Load subapp
 - Pass RML to app
 - Process app
 - Form
 - Generate Action urls and add them to the RML
 - If no cookies
 - Include all variables
 - Remap to new names as described in HAML
 - If cookies are on and the device supports cookies
 - Build cookie creation instructions for:
 - Out variables in the RML
 - Remap to new names as described in HAML
 - Session variables in the RML
 - Remap to new names as described in HAML
 - Return generated markup

Figure 17